AMENDMENT OF THE SPECIFICATION

Applicant respectfully requests that the following amendments to paragraphs be entered. The changes to these paragraphs correct typographical errors and do not add new matter:

[0009] With regards to long and/or lossy media, the amplitude of the data transmission may attenuate in a frequency-dependent manner. Amplification and pre-emphasis by the transmitter as well as amplification and equalization by the receiver accentuate certain frequencies to increase the sampling window. Other circuitry such as[[n]] internal loop filters may be more complex when the media is long and/or lossy.

[0021] Turning now to the drawings, FIG 1 depicts an embodiment of a system 100 including a router 110 and a hub 140 to transmit data from a processor card 105 to a processor card 170. For example, processor card 105 may transmit data 107 to processor card 170 via router 110 and hub 140. Certain details such as data buffers are not shown explicitly for simplicity.

[0022] Router 110 may determine links through which the data 107 will be transmitted and adjust the operation of link circuits of the links to correlate power consumption by the links with characteristics of the data transmission. Router 110 may include routing table 112, port utilization manager 114, global link control 116, read port 120 and write port 130.

[0023] Routing table 112[[0]] may include a database that contains the current network topology, to direct packets of a data transmission out the appropriate port. Route[[ing]] 110 may determine the appropriate path onto which data 107 should be forwarded from routing table 112 based upon a routing protocol. The routing protocol may also allow the network to dynamically adjust to changing conditions by describing how routers share updated information

about the topology. For instance, routing table 112 may indicate a route from processor card 105 to processor card 170 via read port 120, write port 130, read port 150, and write port 160.

[0026] In addition[[al]] to determining the traffic type, global link controller 116 may also determine, e.g., a data frequency at which to transmit data 107. For instance, global link control 116 may determine a rate at which processor card 105 can transmit data 107 as well as the limitations on data frequency, or bandwidth, throughout the links between processor card 105 and processor card 170.

[0032] FIG 2 depicts an embodiment 200 of a link 219 coupled with a global decision device 210 such as router 110 in FIG 1. [[Link]]Embodiment 200 includes a global decision device 210 and a link 219. For example, global decision device 210 makes a routing decision that link 219 is to transmit data at three Gbps instead of ten Gbps. The routing decision involves changing the data frequency of link 219 from ten Gbps to three Gbps and link 219 includes transmitter 220 and receiver 250. Local link control 222 of transmitter 220 receives the decision as a control signal 216 and, in response, turns down the gain of an analog amplifier for driver 228 and turns off pre-emphasis circuit 226. Similarly, local link control 252 of receiver 250 receives the decision as a control signal 218 and, in response, turns down the analog, receiver amplifier 254 and turns off gain and equalization circuit 256. Advantageously, based upon the high-level, routing decision of global decision device 210, power consumption of link 219 is reduced.

[0033] Global decision device 210 may make a global decision regarding an activity assignment for link 219 based upon information about port utilization 205 and forwarding logic 212, and transmit a control signal 216 and 218 to link 219 to indicate the activity assignment for the link. More specifically, global decision device 210 may be part of a switch or router and comprise global link control 214 to determine data transmission characteristics such as the data frequency associated with link 219, the data traffic for link 219, and the medium through which

data transmission 240 is transmitted. For example, global link control 214 may determine whether to turn off link 219 based upon destinations associated with incoming data transmissions and network topology information that associates ports between link 219 and the destination via forwarding logic 212. Global link control 214 may select a data frequency for link 219 based upon a data frequency of an incoming data transmission. And, global link control 214 may read packet headers of the incoming data transmission to determine whether a traffic pattern is a difficult pattern or a simple pattern.

Applicant respectfully requests that the following paragraph be added. The changes to these paragraphs add original dependent claims to the "SUMMARY OF INVENTION" section and do not add new matter:

[0013.1] The embodiments above, wherein the variable power link comprises a transmitter core, the link circuit being a serialization circuit that is configurable to adjust a frequency of the data transmission.

[0014.1] The embodiments above further comprising a local controller, responsive to the control signal, to configure the circuitry associated with the link to operate in the power mode, wherein selection of the power mode is based upon the activity.

[0014.2] The embodiments above, wherein the local controller is adapted to change an operating frequency and an operating voltage for the circuitry based upon the power mode.